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ABSTRACT

This report describes a study investigating the extent to which 2- and 3-year-olds, as they acquire language, continue to use infant nonverbal sharing behaviors (pointing, holding up, giving and partner play) or begin to use language to share in new ways. A group of 2- and 3-year-olds (12 of each) were observed in a playroom setting of three adjoining rooms containing a few toys. Each child participated in a 15-minute session with the mother, who was instructed to remain seated in a large room facing the two smaller rooms, responding to but not directing the child's behavior. Sharing behavior was measured through observation of three types of mother-child "participatory episodes," involving use of: (1) gestures, (2) words, and (3) smiling or nonverbal vocalization. The children exhibited nonverbal sharing behaviors while sharing in new, verbal ways. The older subjects shared less frequently than the younger with the nonverbal behaviors that required proximity to the mother (giving, partner play). Unlike the younger subjects, they were more likely to hold up objects to the mother while at a distance from her, and they participated in dialogues more than the younger, their type of language inviting greater mother participation. (BF)

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Verbal and Nonverbal Sharing by 2- and 3-Year-Olds

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VERBAL AND NONVERBAL SHARING BY 2- AND 3-YEAR-OLDS

Kaye V. Cook University of North Carolina at Chapel Hill

Infants have been reported sharing objects with others by pointing to them, holding them up for another to see, giving them, and participating in partner play. As they acquire language, do they continue to share using the nonverbal sharing behaviors, or do they begin to use language to share in new ways? Twelve 2-year-olds and 12 3-year-olds (all within 2 months of their birthdate) were observed in a playroom setting of three adjoining rooms containing a few toys. Each child participated in a 15-minute session with the mother, who was instructed to remain seated in the larger room, facing two smaller rooms, and to respond but not direct the child's behavior.

The 2- and 3-year-olds exhibited the same nonverbal sharing behaviors as younger children. In addition, both used words to share objects. The older subjects shared less frequently than the younger with the nonverbal behaviors that required proximity to the mother (giving, partner play). Unlike the younger subjects, they were more likely to hold up objects to the mother while at a distance from her. They participated in dialogues more than the younger, especially while away from the mother. Thus, the 2- and 3-year-olds continued to share using the nonverbal sharing behaviors. They enriched these nonverbal behaviors with words and began to share in new, verbal ways. The older ones, even while at a distance from her, made use of their superior linguistic ability to continue to share with her the objects they found there of interest in the environment.

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258-88-0250

Just a few days ago, I was visiting with a friend and met his 2-year-old son Drew for the first time. Within minutes after I got there, Drew walked over to a pile of toys, picked up an Ernie doll, and gave it to me!

We all know from personal experience that children share objects with others. The literature by now contains experimental evidence of this. To obtain this evidence, investigators have defined sharing by nonverbal gestures. Thus, in a study with 12- and 18-month-old children at Chapel Hill, we defined four sharing behaviors: pointing to objects, holding them up, giving them, and participating in partner play. The children participated in partner play when they held or manipulated objects that were in contact with the mother and faced or talked with her. But children may share in other ways than by the gestures. One way is with words. I wanted to find out what happens to children's sharing when they acquire language. Do they still share with the nonverbal gestures we observed in younger children? Do they share with words?

Twelve 2-year-olds and twelve 3-year-olds, each within two months either side of their birthdates, served as subjects. The two age groups were equally divided by sex. The occupational level of their fathers was high; 16 of the 24 held university- or hospitale-related positions.

Each child participated for 15 min in the study which took place in three rooms decorated as playrooms, with toys in them. One-way windows permitted observation of the mother and child. Microphones and cameras transmitted their behaviors onto audio- and video-tape.

The mothers were present during the study, seated in the larger of the three rooms, facing into the two smaller rooms. They were asked to respond normally to their children's behavior but to let the children initiate contact with them and with the toys at will.

To find out how older children share, I needed some measure of sharing. Earlier investigators have selected certain behaviors to measure. They assume that children use these behaviors to

share with others objects the children noticed. Instead, I did the reverse. I measured when the mothers' attended to an object as a result of their children's behavior and investigated how the children drew their mother's attention to the object.

I called this measure of sharing "participatory episodes." With the literature as a guide, I selected certain behaviors children might use to get their mother's attention: 1) they might produce one of the gestures--that is, they might point, hold an object, give an object, or participate in partner play; 2) they might talk about a toy; or 3) they might smile or vocalize to the mothers after manipulating a toy. The episodes began when the children produced any of these behaviors. The literature also suggested possible measures of the mothers' responses to these behaviors. The mothers responded by smiling, talking, or taking the toy. The episodes continued as long as both the mother and child participated.

I chose to call the behaviors sharing behaviors--instead

of, for example, communication or social behavior-- for several reasons. First, the gestures have been called sharing behaviors by other investigators. In addition, I limited the sharing to be of a specific toy and included both non-verbal and verbal behaviors. Most importantly, I felt that the children did notice the objects and call attention to them because, to the children, the objects were noteworthy.

The participatory episodes were of three types. Gestural episodes were those in which the child produced at least one of the gestures. In these, the child might also say something. For example, one 2-year-old girl ran to her mother's side holding a pear, saying "apple, apple". The mother took it and said, "That's not an apple." Verbal episodes, the second type, were those in which the child said at least one word but produced none of the gestures. For example, one boy looked at his mother and said "brrr", as he rolled a truck along the floor. The mother smiled. Then he asked, "You want to see this one? It goes really fast." He looked up

at her as she said, "Yeah. Let me see that." When the children participated in these episodes, they were using their language to share. The third type were episodes in which the children smiled or vocalized but produced none of the gestures and no words and the mothers responded. One child looked at his mother and smiled after dropping a shape into the shape-sorting box; the mother smiled and said "Good". Another bounced the horse along the floor and said "bonk, bonk". As in these examples, the vocalizations carried positive affect. The episodes were a preliminary attempt to measure the sharing of pleasure.

Each of the 24 children engaged in the participatory episodes with their mothers. Each engaged in the gestural type of participatory episodes, using the gestures to share. Most engaged in the verbal episodes, sharing by words. About half engaged in the pleasure episodes, sharing by smiling and vocalizing. Children do indeed share with their mothers objects they find of interest in their environment.

I used the mother's responses as a measure of sharing, but previous investigators have used the child's behavior as their measure of sharing. Do mothers respond to the behaviors that others have called sharing behaviors? The mothers responded to 85% of all the points to toys that were recorded and 96% of the hold ups. They took all objects offered them and participated in all instances of partner play. Thus, the 4 gestures fit the definition of sharing used in this study.

The mothers were instructed to respond naturally to their children and may have interpreted this to mean that they were to respond a lot. It may be then that the mothers responded to these gestures more frequently than they would in some situations. They were not told to which behaviors they were to respond. These results indicate that, when mothers respond, they do respond to these behaviors.

Both the 2- and 3-year-olds shared by the same behaviors but they shared differently. The older children more often used words when they shared than the younger. As the first

slide shows, 19% of the participatory episodes by the younger children were verbal episodes; 40%, by the older. (I report only reliable differences, unless otherwise mentioned.)

To find out how the children used words to share, I grouped their utterances into 5 categories, 2 of which yielded reliable age differences. The next slide shows that the older children made fewer deictic comments but asked more questions than the younger. (Deictic comments tell the name of an object or its location, for example, "ball" or "there".) Deictic comments made up 18% of the utterances by the 3-year-olds; half as many as by the 2-year-olds, 36%. Questions made up 33% of the utterances by the 3-year-olds; 4 times as many as by the 2-year-olds, 8%. Unlike deictic comments, questions, by their grammatical structure, invite the mother's response.

The children's language differed with age in yet another way. Although the older children produced no more utterances than the younger, their utterances were longer. The length

of the utterances, as well as the type of utterance, influenced the children's sharing. The category of see mands illustrate this. See mands were utterances which included the imperatives "see", "look", or "watch". Although age differences in the frequencies with which the see mands occurred were not reliable, the semantic content of these utterances differed. While the 2-year-olds frequently said "look" or "see" without elaborating, the 3-year-olds frequently indicated what the mother should look at.

Differences in their sharing were measured by their distance from the mother. When the two behaviors that required proximity to the mother were examined, the younger children more often produced them than the older. The next slide illustrates age differences in the four gestures. Although differences in the number of points and hold ups were not reliable, the younger children more often gave objects to the mother than the older, an average of about 14 and 3 times respectively, and more often participated in partner

play, an average of about 5 and 2 times respectively.

In contrast, the other two gestures and sharing with words did not require proximity to the mother. The older children more often produced two of these behaviors when at a distance from the mother than the younger. I defined the children to be at a distance when they were in one of the two smaller rooms into which the mothers faced. The older children held objects up when at a distance 67% of the time; the younger children, 39% of the time. They participated in the verbal episodes when at a distance 65% of the time; the younger, 28%.

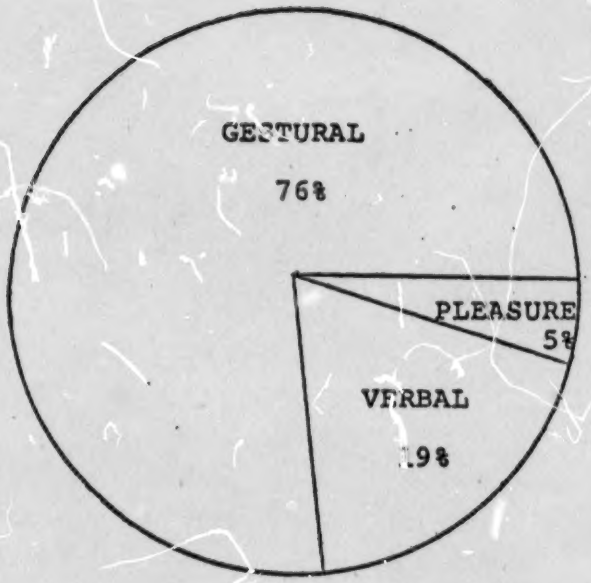
To summarize so far, the older children less often gave objects to the mother and participated in partner play with her than the younger children, behaviors that required proximity to the mother. The older children more often talked about objects with the mothers and more often shared when at a distance from the mothers. Their language invited greater participation from the mothers, because they asked

more questions and because they specified what they wanted the mother to notice. The older children shared with the mothers at times, then, by using language rather than by giving her objects.

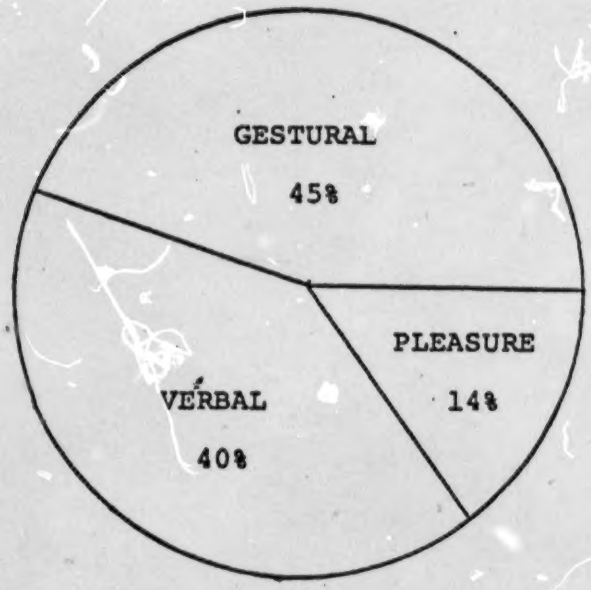
Because the mothers responded to their children's sharing and because the evidence indicates that language at times took the place of giving objects, the gestural sharing behaviors may well be important precursors of later verbal sharing. One may speculate that children acquire abilities when sharing by the nonverbal gestures and that they make use of these abilities when they later participate in verbal exchanges.

The verbal children I observed shared by the gestures that younger children observed by other experimenters produced. They shared as well by words, the 3-year-olds more than the 2-year-olds. Other persons do in fact respond to their sharing. I suggest that when young children share, without words, they acquire some social abilities. Later, when they learn to talk, the social abilities they acquired when sharing, along

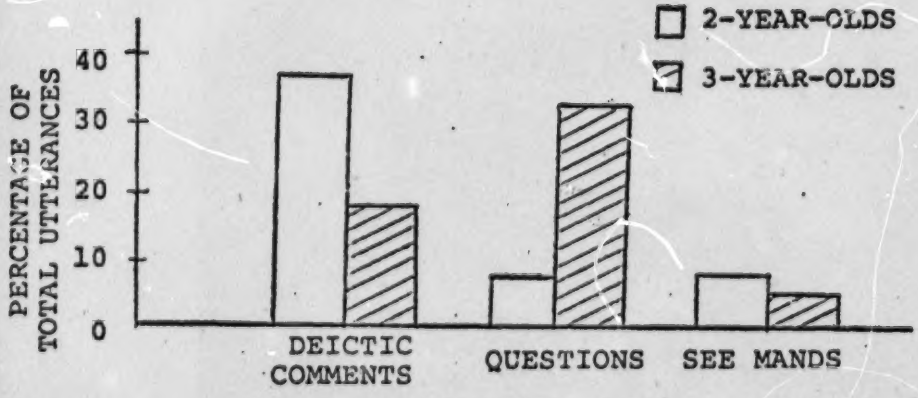
with other abilities, facilitate their learning to engage in linguistic exchanges with others. If my speculations are borne out, as children share with others, they acquire abilities that permit them to engage in cooperative play with peers, that later permit them to engage in linguistic exchanges with peers and adults, and, even later as adults, to participate in a broad class of social relationships.

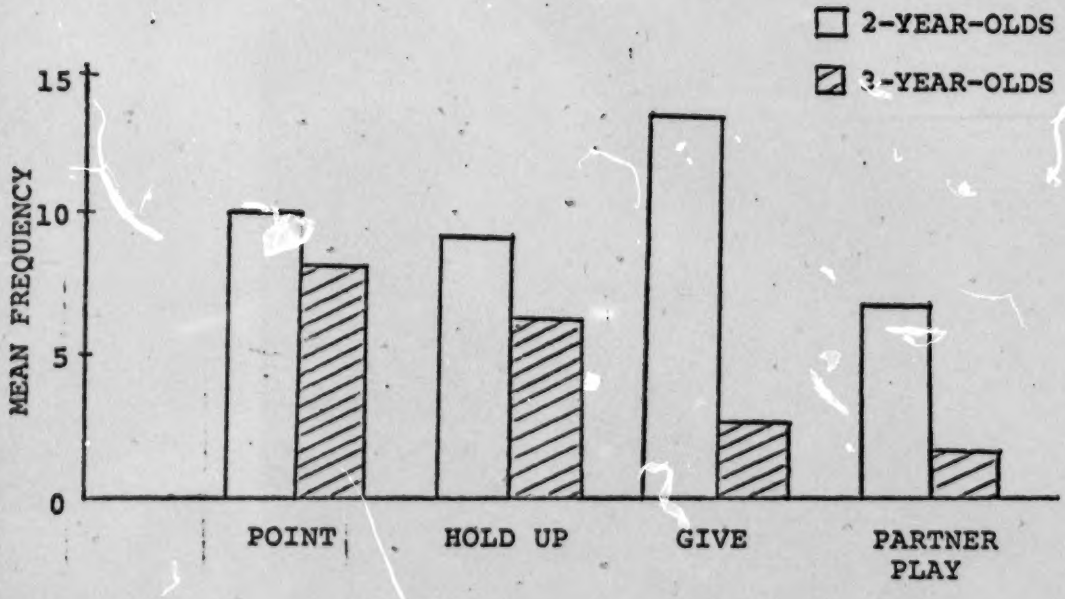


2-YEAR-OLDS



3-YEAR-OLDS


2-YEAR-OLDS
3-YEAR-OLDS
PERCENTAGE OF TOTAL UTTERANCES
40
30
20
10
0
DEICTIC COMMENTS
QUESTIONS
SEE MANDS


2-YEAR-OLDS
3-YEAR-OLDS
MEAN FREQUENCY
15
10
5
0
POINT
HOLD UP
GIVE
PARTNER PLAY